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The Conservation and Heritage Management of the Sanctuary of Lot at Dayr ‘Ayn ‘Abāṭa

Introduction

From the outset of the Dayr ‘Ayn ‘Abāṭa project in 1988, every effort has been made to involve the local community, emphasizing that they are key to the cultural heritage of the site. Hence it has been important to relate the archaeological discoveries to the realities of their own lives. This was particularly challenging because the Ghawr aṣ-Ṣāfi is a relatively under-developed region of Jordan and consequently its inhabitants are financially disadvantaged, with almost no education beyond secondary level. The most immediate and obvious benefit for them was the employment provided by the project. During the project’s seasons from 1988 to 2003, a core of local labourers would return to work at Dayr ‘Ayn ‘Abāṭa, which was of great financial advancement to them and their extended families. Eventually, with the establishment of a Department of Antiquities office on-site and the increasing demand for ancient sites to be guarded, some of these workmen were able to secure permanent jobs. The archaeological and conservation skills which some of the workers had acquired from on-site training further enhanced their employment opportunities.

With the completion of the archaeological excavation at the Sanctuary of Lot, its development as a site with tourism potential created further opportunities for the local community. The Ministry of Tourism and Antiquities of Jordan made substantial funds available to consolidate all the ancient structures re-build a long protective wall above the site and improve visitor accessibility by building a road and a stone stairway leading up to the site. The conservation of the mosaic pavements greatly contributed to the site’s visual appeal. The feasibility of a protective shelter erected above the mosaics, which has been studied by Dr Zaki Aslan (ICCROM) and designed by architect Leen Fakhouri, has yet to be

started.

In 2004, the Department of Antiquities of Jordan proposed that Dayr ‘Ayn ‘Abāṭa should be entered on UNESCO’s World Heritage List. Although the bid was unsuccessful, it demonstrated how valued the site had become nationally.

Finally in 2005, the building of a museum at Dayr ‘Ayn ‘Abāṭa guaranteed the permanent protection of the site and ensured long-term employment benefits for the local community. Furthermore, the exhibiting of archaeological finds from the excavations will demonstrate, for the first time, the presence of a long and continuous history thereby creating a sense of heritage for the local population.

In addition to articles in *ADAJ*, *Liber Annus* and *Delteon*, a full and final publication of all the studies on Dayr ‘Ayn ‘Abāṭa has been produced by the British Museum Press (Politis 2008).

History of the Project

Local inhabitants in the Ghawr aṣ-Ṣāfi region were well aware of the ancient ruins above ‘Ayn ‘Abāṭa long before archaeologists investigated the area. In fact, they claimed that during the 1970 hostilities in Jordan, P.L.O. fighters used the ruins as a refuge from Israeli aerial bombardment, the physical evidence of which was clearly apparent on the site.

It was not until 1984 that Italian Impresit Construction Company employees mentioned the site to Walter Rast, Director of the Expedition to the Dead Sea Plain, and to Father Michele Piccirillo of the Franciscan Biblical Pontifical Institute, who took the first known photograph of the visible structures (Piccirillo 1990: 74-75). The Impresit Company was responsible for discovering many antiquities in the Ghawr aṣ-Ṣāfi area during excavations to install underground water irrigation pipes. It was also responsible for seriously damaging many of these

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ancient sites and, worse, inadvertently creating a local market for the trade of antiquities (Politis 1994: 12-15, 1998: 627-634). This was clearly evident at 'Ayn 'Abāṭa where bulldozer tracks are still visible halfway up the slope leading to the ancient site (FIG. 1). According to the locals, this was part of an effort to collect architectural stones, which had tumbled down the slope. There is also evidence that parts of the mosaic pavements were illicitly removed.

In 1985 Rast mentioned the existence of a site above 'Ayn 'Abāṭa to Burton MacDonald, Director of the Southern Ghawrs and Northeast 'Arabah Archaeological Survey, who visited it on 26 October 1986 and was the first to officially report it, as SG-NAS site number 46 (MacDonald 1988: 37, 1992: 253-254). After a second visit on 19 December 1986 with Rami Khouri, then Editor-in-Chief of the Jordan Times newspaper, they decided to name the site Dayr (Arabic for monastery) 'Ayn 'Abāṭa since it seemed to them to be a monastic complex (Khouri 1988: 108). The following year, on 24 March, MacDonald introduced Dayr 'Ayn 'Abāṭa to Konstantinos D. Politis and during this visit more surface finds were collected. Along with this evidence, the visible architectural remains strongly suggested the presence an early Byzantine monastery (MacDonald and Politis 1988: 292-291). The possibility that this was the long-sought "Sanctu-

ary of Aghios Lot", depicted on the Mādabā mosaic map, inspired the author to plan an excavation project at the site.

In August 1987, permission was granted by the Department of Antiquities of Jordan for the author to conduct an initial topographical survey, with the assistance of the German Protestant Institute of Archaeological in 'Ammān. This resulted in the first modern architectural plan of the site by Norbert Hagen (MacDonald and Politis 1988: 287, pl. 18). Although this was only a preliminary plan, it served as a basis for all future work at Dayr 'Ayn 'Abāṭa.

On 12 July 1988, the author first met David Buckton, then Curator of Byzantine Antiquities in the Department of Medieval and Later Antiquities of the British Museum, who agreed to submit a rescue excavation proposal for Dayr 'Ayn 'Abāṭa to the Trustees of the Museum. The proposed budget was approved and by November 1988 the author had assembled a small experienced team of archaeologists who began the first season of excavation with the approval of the Department of Antiquities of Jordan. This was followed by six more excavation seasons sponsored by the British Museum under continued licence from the Department, in 1990, 1991, 1992, 1994, 1995 and 1996 (FIG. 2). From 1993 to 2005 the British Museum sponsored the post-excavation studies of the excavations, with



1. 2004 satellite image of Dayr 'Ayn 'Abāṭa showing ancient site, road and museum foundations (courtesy Google Earth).



2. Composite aerial view of the Sanctuary of Lot after excavation (photo A. Milton).

the objective of publishing the results in a British Museum Press monograph.

After a visit to Dayr 'Ayn 'Abāṭa in 1993, the late Mr Nasri 'Atalla, then Secretary-General of the Ministry of Tourism, initiated support from the Ministry for the consolidation and protection of the ancient structures, as well as the development of the site for tourism, which continued each year until 2001.

From 2001 to 2005 the European Centre for Byzantine and Post-Byzantine Monuments (Thessaloniki, Greece) funded the conservation of the mosaic pavements at the site, in collaboration with the Department of Antiquities of Jordan (Chlouveraki and Politis 2001). The work concentrated on the restoration and replacement of the Nave Mosaic and the lifting and the re-assembly of the fragments of the Diakonikon Mosaic (Chlouveraki 2008). Finally, on 4 April 2002, when this work was nearing completion, a blessing was conducted in the church by His Eminence Metropolitan Venedictos of Philadelphia under the patronage of Dr Fawwaz Al-Khraysheh, Director-General of Antiquities and the Ambassadors of Greece and the United Kingdom (FIG. 3).

Conservation of Mosaics and Related Structures

Six mosaic pavements associated with the basilica church were uncovered at Dayr 'Ayn 'Abāṭa (FIG. 4). The variable condition of the mosaics neces-



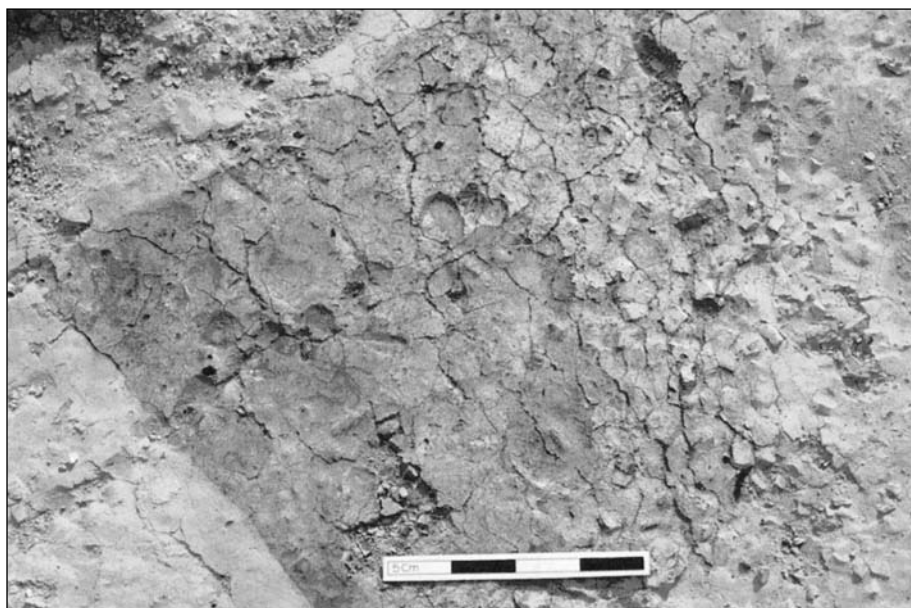
3. Ceremony blessing the Basilica of Lot, 4 April 2002 (photo D. Sully).

sitated the use of diverse conservation treatments according to specific needs. A policy was developed by the conservators, in conjunction with the director of the project, to conserve the mosaics *in situ* where possible. In order to minimise further deterioration, various *in situ* interventions were required.

Between 1988 and 1991, on-site 'first aid' rescue treatments were conducted during excavation seasons when required. From 1993 to 1995, systematic *in situ* conservation of mosaics in the north aisle of the church and cave were carried out. The Nave Mosaic was lifted in 1994 in twenty-two sections employing the 'puzzle technique' and the underlying architectural structures were consolidated. During this process, several unprecedented and



4. Aerial view of Lot basilica with mosaics (photo: J. Taylor).



5. Mosaicists' foot prints in mortar beneath mosaic (photo S.Chouveraki).

well-preserved mosaicists' footprints were found in the mortar beneath the mosaic pavement. Smaller parts of the Chancel Mosaic, which were found to be unstable, also had to be removed (FIG. 5).

Between 1999 and 2003, the foundation and mosaic pavement in the Nave were reinstalled. Simultaneously, the excavation, cleaning, stabilisation, documentation, digital photographic restoration and storage of the very fragmented mosaic in the Diakonikon was also completed (FIG. 6).

The Nave Mosaic was successfully reinstalled in 2002, eight years after it had been removed (FIG.

7). The process was greatly aided by the enthusiasm and newly acquired skills of the locally-trained technicians, who are now able to work without supervision (they were most recently present at the discovery of a new mosaic pavement at Khirbat ash-Shaykh 'Īsā in Ghawr aṣ-Ṣāfi).

Conservation Objectives and Approaches 1994-2004

During this period, there was an examination and evaluation of the long-term effectiveness of the treatments. Various mortar samples and consolida-



6. Digital restoration of central section of Diakonikon Mosaic (photo S. Chlouveraki).

tion materials have been exposed to the site's environment and subsequently evaluated.

The training of local workmen on the technical aspects of conservation and maintenance has been one of the most important objectives of the project. After ten seasons of experience, four local workers are now capable of examining and evaluating the condition of mosaics and of carrying out small-scale stabilisation interventions.

Interaction with the local population and various cultural and educational organisations has resulted in a better understanding of the cultural significance of the site and its conservation and preservation requirements. Consequently the potential of damage due to vandalism, from which the site has suffered in the past, has been greatly reduced.

The project has offered both undergraduate and graduate students the opportunity of participating in the project in order to broaden their experience in the conservation of mosaics. This has been expanded upon by encouraging students to visit and work on other mosaic sites in Jordan. A conserva-



7. Reinstalling the Nave Mosaic, 3 March 2002 (photo K. D. Politis).

tion-based protective shelter has been designed, that takes into account the environmental parameters as well as the architectural and cultural significance of the site (Aslan 2001: 77-79). A special computer programme has been used to simulate heat transfer and air movements within the structure in order to verify the effectiveness of the proposed architectural solutions against the prevailing climatic conditions.

The introduction of digital multimedia into archaeological research has been an effective tool in the documentation, presentation, interpretation, on-line communication and publication of data. With this in mind, a CD ROM presenting the site and its conservation project has been made, which can be of use to Jordanian and foreign cultural and educational organisations as well as to the general public. In the process of lifting the Nave Mosaic, the *ambo* base had to be dismantled. Beneath this base, and sharing the same seven-sided profile, a section of an earlier mosaic pavement was found. It proved to be contemporary with the north aisle pavement. It was decided to remove and conserve this mosaic for museum exhibition, as it would inevitably be obscured by later restorations of the *ambo* and would consequently not be visible if left *in situ* (FIG. 8).

Heritage Management and Protection

When the excavation of Dayr 'Ayn 'Abāṭa began, it was envisaged as a simple archaeological investigation. Due to the unexpected historic and religious significance of the site that was revealed during ten years of excavation, it became clear that it would become an important tourist attraction. The lifting, leveling and reinstallation of the Nave Mosaic, together with the *in situ* conservation of the remain-



8. Earlier mosaic under *ambo* after conservation (photo K. D. Politis).

ing pavements was carried out with this in mind. Planning and construction with visitors in mind also included the construction of a mosaic shelter, protective wall above the entire site, drainage system, road with car park, paved walkway from the car park to the monastery and site museum.

The foundation walls beneath the nave, which were exposed after the mosaic pavement was lifted in 1994, were consolidated with lime mortar and rebuilt on the western down-slope side of the basilica. A 1.5m. high metal fence was erected, completely enclosing all the mosaic pavements in the church and making them inaccessible without permission (FIG. 9). The conglomerate slope above the site was cleared of loose stones to protect the ancient ruins, as well as people below. A long protective



9. Mosaics at Basilica of Lot after conservation, enclosed by an iron fence (photo K. D. Politis).

wall with an adjacent water channel was also built above the entire site (FIG. 10). These works were funded with British and US aid agency assistance.



10. Long protective wall and water channel above Lot's sanctuary (photo K.D. Politis).

The Ministry of Tourism and Antiquities funded the construction of the road leading up to the site and made a stairway of local stone, wooden steps and railings on the ancient site itself, as well as erecting temporary signs (FIGS. 11, 12, 13, 14). All these works were supervised by the author. Finally, a shelter needs to be erected as soon as possible over the basilica church, to protect the building and mosaic pavements from the harsh local environment. This will also help to ensure that the site will survive for future generations.

The Museum Idea and its Realisation

The idea of a museum at the lowest place on earth, in Ghawr aş-Şāfi, was originated by the author in 1996 while he was directing archaeological excavations in the area. This field work focused on the Sanctuary of Lot at Dayr 'Ayn 'Abāṭa, which was proclaimed a holy *maqām* (site of Islam) by H.M. the late King Hussein in 1995, and was consequently placed under the protection of both the Ministry of Awqaf (religion) and Ministry of Tourism and Antiquities. This location encompasses an area of *ca.*



11. Site sign temporary (photo K. D. Politis).



12. Stone stairway leading to Lot's sanctuary (photo K.D. Politis).



13. View of lowest place on earth and Dead Sea from Dayr ‘Ayn ‘Abāṭa, February 2004 (photo G. A. Sakellariou).



14. Consolidating church and reservoir at Dayr ‘Ayn ‘Abāṭa (photo K.D. Politis).

2,000 by 500 metres, located at the south-eastern end of the Dead Sea basin (FIG. 13), which at its lowest level is approximately 405 metres below sea level — the lowest place on the earth’s surface. The site is also mid-way between ‘Ammān and Petra or ‘Aqaba (about 1 1/2 hours in either direction) on the new highway — known as the ‘Dream Road’ — along the eastern shore of the Dead Sea.

In 1999, the Arab Potash Company donated JD 50,000 to the Ministry of Tourism and Antiquities for the construction of a museum. These funds were used to commission the design of the museum

by George Hakim and Associates, which was completed by July 2004 (FIG. 15). The design was then carefully studied by the Department of Antiquities of Jordan and the author, after which some minor alterations were suggested. In 2004, JD 600,000 of initial funding was acquired from the Jordanian government by the Ministry of Tourism and Antiquities. After a public tender, the construction contract was awarded to the Amjad Madanat Contracting Firm; by the end of that year excavation of the foundations had begun (see FIG. 1).

Additional funds were allocated by the Minis-



15. Design of site museum (G. Hakim).

try of Tourism and Antiquities in 2006 in order to complete the project, which included terrace and road stabilisation to prevent water erosion, as well as an additional JD 250,000 for furnishings and equipment, bringing the cost of the building to JD 1,000,000 (FIG. 16).

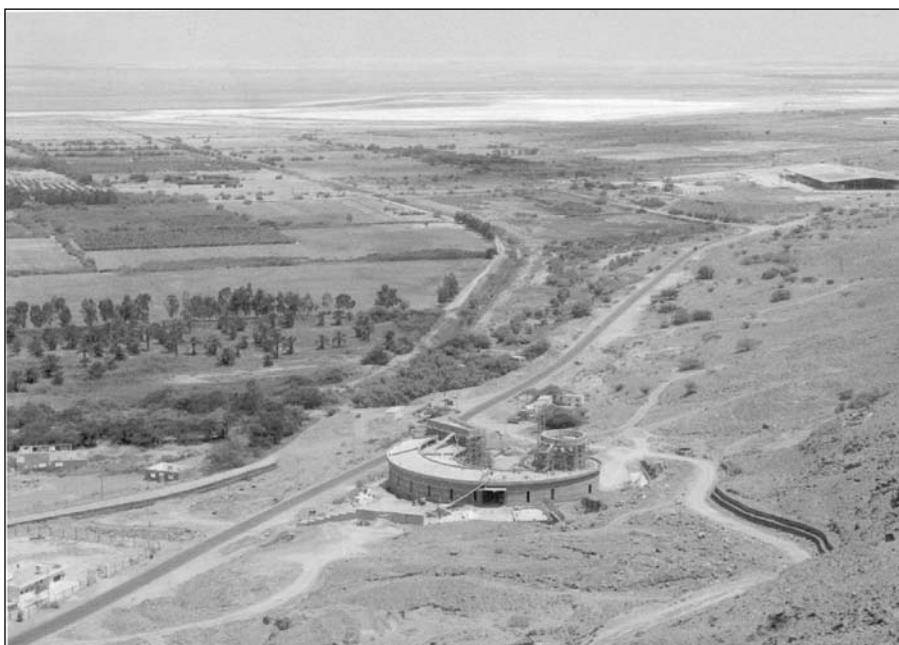
In April 2007 a contract was signed between the Ministry of Tourism and Antiquities and the Hellenic Society for Near Eastern Studies to complete the interpretation and design of the exhibition of the museum by August 2008.

Museum Theme

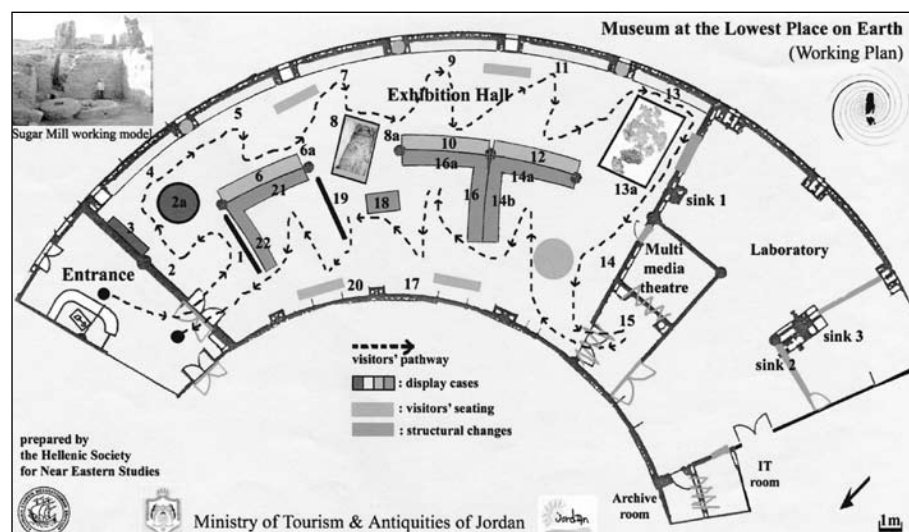
The objective of the museum's exhibitions is to look beyond Dayr 'Ayn 'Abāṭa itself, describing

the various peoples who have lived and travelled along the south-eastern shores of the Dead Sea, an area referred to today as the Southern Ghors. The overall concept is therefore entitled *The Peopling of the Lowest Place on Earth*.

The environment and landscape of the region will be explained, in order to demonstrate how these factors directly affected human activities. Although a chronological framework will not be strictly adhered to, the exhibition will begin with the earliest human settlements and their development into urban centres, along with their associated economies. The material evidence of the ancient cultures of the region, including of their burial types, traditions and ethnicity, will be displayed and explained (FIG. 17).



16. View of the *Museum at the Lowest Place on Earth* from Dayr 'Ayn 'Abāṭa, June 2006 (photo K. D. Politis).



17. Exhibition plan of the *Museum at the Lowest Place on Earth* (courtesy Hellenic Society for Near Eastern Studies).

Special exhibits will focus on the scientific analysis of archaeological finds, and the results will be related to anthropological studies of human habitation.

Finally, the museum will not only introduce the site of Dayr ‘Ayn ‘Abāta, but will also place it in the context of other archaeological sites in the Southern Ghawrs region of Jordan, making it truly *The Museum at the Lowest Place on Earth*.

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